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Dnmt1 Antibody
Rabbit mAb
Catalog # AP91080

Specification

Dnmt1 Antibody - Product Information

Application	**WB, IHC, ICC**
Primary Accession	P26358
Reactivity	**Rat**
Clonality	**Monoclonal**

Other Names
ADCADN; CXXC finger protein 9; CXXC9; DNA methyltransferase 1; DNA MTase; Dnmt1o; HSN1E; M.HsaI; MCMT; Met1; MommeD2;

Isotype	**Rabbit IgG**
Host	**Rabbit**
Calculated MW	**183165 Da**

Dnmt1 Antibody - Additional Information

Dilution	**WB~~1:1000** **IHC~~1:100~500** **ICC~~N/A**
Purification	**Affinity-chromatography**
Immunogen	**A synthesized peptide derived from human Dnmt1**
Description	**Methylation of DNA at cytosine residues in mammalian cells is a heritable, epigenetic modification that is critical for proper regulation of gene expression, genomic imprinting and development. It is responsible for maintaining methylation patterns established in development. DNA methylation is coordinated with methylation of histones. Mediates transcriptional repression by direct binding to HDAC2.**
Storage Condition and Buffer	**Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.**

Dnmt1 Antibody - Protein Information

Name DNMT1

Synonyms AIM, CXXC9, DNMT

Function
Methylates CpG residues. Preferentially methylates hemimethylated DNA. Associates with DNA replication sites in S phase maintaining the methylation pattern in the newly synthesized strand, that is essential for epigenetic inheritance. Associates with chromatin during G2 and M phases to maintain DNA methylation independently of replication. It is responsible for maintaining methylation patterns established in development. DNA methylation is coordinated with methylation of histones. Mediates transcriptional repression by direct binding to HDAC2. In association with DNMT3B and via the recruitment of CTCFL/BORIS, involved in activation of BAG1 gene expression by modulating dimethylation of promoter histone H3 at H3K4 and H3K9. Probably forms a corepressor complex required for activated KRAS- mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed:24623306). Also required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:24623306). Promotes tumor growth (PubMed:24623306).

Cellular Location
Nucleus. Note=Localized to the perinucleolar region.

Tissue Location
Ubiquitous; highly expressed in fetal tissues, heart, kidney, placenta, peripheral blood mononuclear cells, and expressed at lower levels in spleen, lung, brain, small intestine, colon, liver, and skeletal muscle. Isoform 2 is less expressed than isoform 1.

Dnmt1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Dnmt1 Antibody - Images

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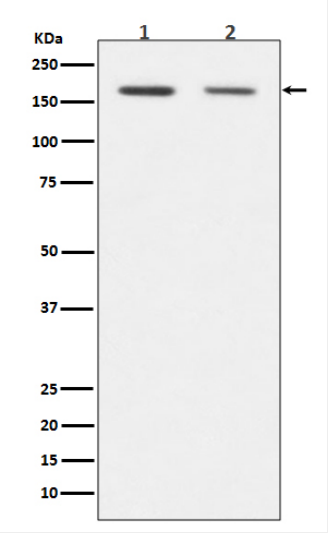

Western blot analysis of Dnmt1 expression in (1) HEK293 cell lysate; (2) NIH/3T3 cell lysate.